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LLDH-RO Roche

L-Lactate Dehydrogenase (L-LDH)

Synonyme(s):

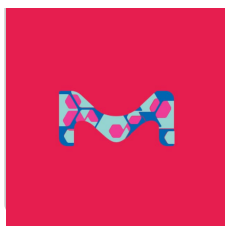
L-LDH, L-Lactate Dehydrogenase, l-lactate

Numéro de classification
(Commission des enzymes):[1.1.1.27 \(BRENDA, IUBMB\)](#)

Référence	Conditionnement	Disponibilité		Prix	Quantité
10127230001	2 ML	✓ Only 6 left in stock (more on the way)	Détails...	58,80 €	- + i
10127876001	5 ML	✓ Only 3 left in stock (more on the way)	Détails...	111,00 €	- + i
10127884001	10 ML	✓ Date d'expédition estimée le 03 octobre 2022	Détails...	372,00 €	- + i

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PRODUITS RECOMMANDÉS



Sigma-Aldrich

L2500**L-Lactic Dehydrogenase from rabbit muscle**Type II, ammonium sulfate suspension, 800-
1,200 units/mg protein[Consulter le prix et la disponibilité](#)

Roche

10107085001**L-Lactate Dehydrogenase (L-LDH)**

from hog muscle

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PROPRIÉTÉS

Forme	suspension
Niveau de qualité	100
specific activity	~550 units/mg protein (at 25 °C (1,100 U/mg at 37 °C) with pyruvate as the substrate.)
Conditionnement	pkg of 10 mL (10127884001 [100 mg]) pkg of 2 mL (10127230001 [10 mg]) pkg of 5 mL (10127876001 [25 mg])
manufacturer/tradename	Roche
Expédié(e)s dans	wet ice
Temp. de stockage	2-8°C

Catégories apparentées

Roche® Life Science Products

DESCRIPTION

Description générale

L-lactate:NAD⁺ oxidoreductase.

L-lactate dehydrogenase catalyzes the reversible reduction of pyruvate to L-lactate.

Spécificité

L(-)-Lactate dehydrogenase (LDH) is specific for L(-)-lactate (relative rate = 100). It does not react with D(-)-lactate. LDH will also slowly oxidize glyoxylate (oxoacetate), glycerate and 3-halogen derivatives of L-lactate (rate with each, ≤ 1); 3-phosphoglycerate does not react. LDH will reduce pyruvate (2-oxopropanate; relative rate = 100) and other 2-oxoacids (e.g., 2-oxobutyrate), with rates decreasing rapidly with increasing chain length of the acid. Heart LDH reacts with 2-oxobutyrate at a greater rate than does skeletal muscle LDH. LDH will also oxidize 2,4-diketoacids (relative rate = 10). The enzyme is relatively specific for NAD(H) (relative rate = 100); NADP(H) is utilized much less efficiently (relative rate < 1). Representative K_m s for (hog) skeletal muscle LDH (pH 7.5) are lactate, 8.3 mM; pyruvate, 0.12 mM; NAD, 0.10 mM; NADH, 0.012 mM. Representative K_m s for (pig) heart LDH (pH 7.5) are lactate, 3.3 mM; pyruvate, 0.15 mM; NAD, 0.07 mM; NADH, 0.011 mM. In general, the concentration of pyruvate (reduction reaction) or of L-lactate (oxidation reaction) necessary to obtain a maximal rate with LDH is lower for preparations from heart tissue than for the preparations from skeletal muscle.

Application

Reduction of α -ketoacids to α -hydroxycarboxylic acids, or reverse reaction.

Séquence

LDH is a tetramer (MW = approx. 140,000 D, rabbit muscle or pig heart LDH). In mammals, there are two types of LDH subunits, M and H, with similar molecular weight (subunit MW $\approx 36,500$ D) but differing amino acid composition. Therefore, 5 electrophoretically distinguishable LDH isoenzymes, LDH-1 through LDH-5, of differing subunit composition, are

found in mammals.

The molecular weight of all LDH isoenzymes is approximately the same.

- LDH-1 (H_4), LDH-2 (H_3M): predominant components of heart LDH
- LDH-3 (H_2M_2): principal component of LDH from lymphatic tissue
- LDH-4 (HM_3), LDH-5 (M_4): predominate in skeletal muscle or liver LDH

Note: The M subunit of LDH used to be designated the A subunit; the H subunit was the B subunit. Under the old designation, LDH-1 isoenzyme was LDH-B4.

Définition de l'unité

One unit (U) lactate dehydrogenase will reduce 1 mol of pyruvate to L-lactate in 1 minute at +25 °C and pH 7.0.

Note: For preparations H and I, the activity is defined at +30 °C, pH 7.8. The above assay consumes 1 mol of NADH per mol of pyruvate reduced.

Unit Conversion: **For the reduction reaction, pyruvate as substrate:**

1 U (+25 °C) 1.5 U (+37 °C) [hog muscle LDH in glycerol].

1 U (+25 °C) 1.8 U (+37 °C) [hog muscle LDH in ammonium sulfate].

1 U (+25 °C) 1.1 U (+30 °C) 2.0 U (+37 °C) [rabbit muscle LDH].

1 U (+25 °C) 1.4 U (+30 °C) 2.5 U (+37 °C) [pig heart LDH].

1 U (+25 °C) 2.5 U (+37 °C) [beef heart LDH].

Forme physique

Suspension in 3.2 M ammonium sulfate solution, pH approximately 7

Notes préparatoires

Activator: 2-amino-2-methyl-1-propanol, diethanolamine, fluoride and heparin (oxidation reaction). Sodium sulfite (Na_2SO_3) will protect the enzyme from the effects of thiol-attacking reagents. Mercaptans can reverse the inhibitory effects of thiol-attacking reagents.

Remarque sur l'analyse

Absorbance: The purified enzyme from beef heart has an absorbance of 14.9 (10 mg/ml, 280 nm).

Autres remarques

For life science research only. Not for use in diagnostic procedures.

INFORMATIONS SUR LA SÉCURITÉ

Code de la classe de stockage

12 - Non Combustible Liquids

WGK

WGK 1

Flash Point(F)

does not flash

Point d'éclair C

does not flash

DOCUMENTATION

Certificat d'analyse

Saisir un numéro de lot pour rechercher un certificat d'analyse (COA).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COA)

Rechercher

Certificat d'origine

Saisir un numéro de lot pour rechercher un certificat d'origine (COO).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COO)

Rechercher

Fiche D'informations Produit

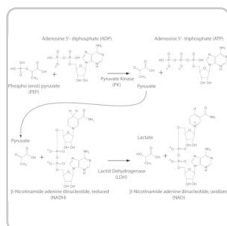
[Product Information Sheet - LLDHRO](#)

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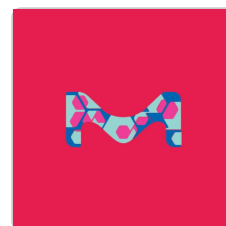
Sigma-Aldrich

P0294

Pyruvate Kinase/Lactic Dehydrogenase enzymes from rabbit muscle

For the Determination of ADP, buffered aqueous glycerol solution

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Sigma-Aldrich

L2625

L-Lactic Dehydrogenase from bovine heart

Type III, ammonium sulfate suspension, ≥500 units/mg protein

[Consulter le prix et la disponibilité](#)

ARTICLES REVUS PAR DES PAIRS

L-Lactate dehydrogenase: substrate specificity and use as a catalyst in the synthesis of homochiral 2-hydroxy acids.

Kim Mahn Joo

Journal of the American Chemical Society, 110.9, 2959-2964 (1988)

Citrate uptake in exchange with intermediates in the citrate metabolic pathway in *Lactococcus lactis* IL1403.

Agata M Pudlik et al.

Journal of bacteriology, 193(3), 706-714 (2010-12-01)

Carbohydrate/citrate cometabolism in *Lactococcus lactis* results in the formation of the flavor compound acetoin. Resting cells of strain IL1403(pFL3) rapidly consumed citrate while producing acetoin when substoichiometric concentrations of glucose or L-lactate were present. A proton motive force was generated

MAPK14/p38 α -dependent modulation of glucose metabolism affects ROS levels and autophagy during starvation.

Enrico Desideri et al.

Autophagy, 10(9), 1652-1665 (2014-07-22)

Increased glycolytic flux is a common feature of many cancer cells, which have adapted their metabolism to maximize glucose incorporation and catabolism to generate ATP and substrates for biosynthetic reactions. Indeed, glycolysis allows a rapid production of ATP and provides

PRODUITS CONSULTÉS RÉCEMMENT



Roche

10110434001

Xanthine Oxidase (XOD)

from cow milk



Roche

10109886001

Trypsin Inhibitor

from soybean

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